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ABSTRACT

This action research project evaluated a program to improve student motivation, attendance rate, percent of homework returned, and student academic growth. The targeted population was a seventh-grade class in a middle school in north central Illinois. The problem of inadequate student motivation was documented by means of attendance rates, students' time-on-task, class participation, and teacher journals recording classroom behavior and academic achievement. Analysis of probable cause research revealed that students' inadequate motivation is related to their poor self-esteem, unchallenging and repetitive assignments, emotionally stressful classroom environments, and extensive use of extrinsic rewards. A review of solution strategies resulted in the selection of three major categories of intervention: cooperative learning, students choice in activities and assignments, and lessons designed to reflect students' learning preferences. Post-intervention data indicated an increase in intrinsic motivation. Behaviors believed to be extrinsically motivated, such as attendance and homework completion, showed smaller increases. (Five appendixes include observation checklists and sample instructional materials. Contains 36 references.) (Author/EV)

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IMPROVING THE MOTIVATION OF MIDDLE SCHOOL STUDENTS THROUGH THE USE OF CURRICULAR AND INSTRUCTIONAL ADAPTATIONS

Todd Eisele

An Action Research Project Submitted to the Graduate Faculty of the School of Education in Partial Fulfillment of the Requirements for the Degree of Masters of Arts in Teaching and Leadership

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ABSTRACT

This research paper describes a program to improve student motivation, attendance rate, percent of homework returned, and student academic growth. The targeted population consists of a seventh grade class in a middle school located in a growing middle class community in north central Illinois. The problem of inadequate motivation will be documented through data revealing attendance rate, students' time-on-task, students' class participation, and teacher journals recording classroom behavior and academic achievement.

Analysis of probable cause research revealed that students' inadequate motivation is related to their poor self-esteem, unchallenging and repetitive assignments, emotionally stressful classroom environments, and extensive use of extrinsic rewards.

A review of solution strategies suggested by knowledgeable others, combined with an analysis of the problem setting, resulted in the selection of three major categories of intervention: cooperative learning, students choice in activities and assignments, and lessons designed to reflect students' learning preferences.

Post intervention data indicated an increase in intrinsic motivation. Behaviors believed to be extrinsically motivated show a smaller increase.

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CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

General Statement of the Problem

The students of the targeted middle school class exhibits inadequate motivation that interferes with academic achievement. Evidence for the existence of this problem includes office records documenting attendance rate, teacher records indicating percent of homework return, and assessments that reflect student academic growth.

Immediate Problem Context

The school site in this study is a middle school. The school population consists of neighborhood children as well as minority children who are bused from other neighborhoods in order to comply with the mandatory desegregation guidelines of the district. School A consists of seventh and eighth grades. There are 945 students enrolled in the school. There are 520 male students and 425 female students who make up this population. The student ethnic background is as follows: 29% African-American, 62% Caucasian, 3.7% Asian/Pacific Islander, and 3.9% Hispanic. Thirty percent of the student population are of low income, live in foster homes, or are eligible to receive free or reduced priced lunch. School A has an attendance rate of 90.4%. The chronic truancy rate is 5.3%. The student mobility rate is 19.4% (School Site A Improvement Plan, 1995).

The faculty and staff working at School A consist of 103 part-time and full-time employees. The faculty consists of 71 instructors, three administrators, and three guidance counselors. Of those individuals, 88% are Caucasian, 12% are African-American, and 0.4% are Asian/Pacific Islander. The average age of the faculty is 45 years. A large portion of the faculty, 68%, has earned a masters degree. Twenty-three percent are currently working towards a masters degree. The average length of teaching experience is 14.9 years. Nineteen individuals make up the support staff. The support staff includes a nurse, a psychologist, a social worker, and a speech and language specialist. There are three clerical workers, a cafeteria worker, three hall aides, and eight classroom aides. The recent job of parent liaison was added to the building in an effort to increase and improve communication with parents concerning student behavior and academic performance (School Site A Improvement Plan, 1995).

School Site A is a relatively modern building that was built in 1971. The building is a two story brick structure which is nestled on a 21.5 acre plot of land. All areas of the school are air-conditioned except for the gym. There are 50 classrooms in School A. In addition to the gym, there is a home arts room, a pool, three band/choral rooms, two technology labs, a cafeteria, an auditorium, and a large learning center. Additional rooms in the building include two offices housing the guidance counselors and administrators, and several teachers' work rooms and lounges.

Most of the classrooms were originally large open pods used for team teaching. Makeshift walls and large plastic curtains have since been put up in an effort to divide the spaces into separate classrooms. As a result, noise from neighboring classrooms is frequently a distraction. Interior improvements have been made within the last three years including asbestos removal and new carpeting. The building, as well as the campus, is very well maintained, giving it a tailored appearance.

School A has many special programs designed to meet the social, emotional, and physical needs of its students. In the 1993-1994 school year, the school implemented a renaissance program. The program, We Inspire New Generations of Students (WINGS), was designed to give positive reinforcement rewards to students who achieve given requirements. The program uses donated goods and store discounts as incentives.

To help meet the recommendation of an advisor/advisee program, School A is piloting a program called Choices. The program is designed to give a small group of 12-15 students one adult who can help them through the struggles of being adolescents. Each year the school puts together an all-school interdisciplinary unit (IDU). The function of an IDU is to show student show all disciplines can relate to the same topic.

To help students in the development of their social behaviors, the school offers many programs such as peer mediation, conflict resolution, and a student assistance program.

Tutoring programs have been organized in order to raise achievement levels of targeted students in both classwork and standardized tests. The building staff developers coordinate many other services for both faculty and students. Some of these services include workshops, inservices, and alternative lessons in the classroom. Recently a program entitled the Suspension Intervention Program (SIP) was implemented in the school in an effort to reduce the number of students who are frequently suspended and to help these students achieve. School A also offers an after-school intramural program designed to allow all students to participate in sports and leisure activities. The county health department offers weekly sessions for targeted at-risk students in an attempt to educate them on drug prevention and to enhance their decision-making skills.

The school is located in the northeast portion of a relatively large urban community. The school is located in one of the highest income areas in the city. Median income of the area is $58,512 (Claritas Inc., 1995). The community is predominately Caucasian, however several African-American, Asian, and Indian families reside there as well. The neighborhood is characterized by medium to large well-kept homes built 30 to 40 years ago. The average home value is listed at $114,080 (Claritas Inc., 1995). Residential, private, and public properties are well manicured and virtually litter free. School A is located primarily in a residential area, yet a scattering of businesses such as, strip malls, banks, gas stations, and

churches are proximate to the facility. Many of the residents living in the community are college educated, white collar professionals. There is a large number of successful business owners and executives. Due to the easy access to the State's largest city, many of the residents of this area commute from here to their places of employment.

Many school issues and concerns are faced by School Site A. One of the main concerns is the involvement of parents, particularly minority parents, in school related events, activities, and academics. Due to the fact that most minority parents do not live in the neighborhood, contact and transportation tend to be a problem. The parent liaison has helped to improve parent participation.

Student achievement continues to be an issue at School A as well. Tutoring and mentoring programs, a homework hotline, and a homework club have been established to help targeted students excel. Staff developers work with teaching teams and counselors in the effort to plan and develop instructional strategies designed to help all students achieve (School Site A Improvement Plan, 1995). Due to the varying incomes and socio-economic status of the students, teachers and staff must constantly be sensitive to the student differences. In an effort to involve the surrounding community, events such as career day and the interdiciplinary unit(IDU), which requires the participation of local businesses and institutions, are planned each year.

School Site A is located in a large, urban area with a

population totaling 140,000. The school district consists of four high schools, four middle schools, and 42 elementary schools. The total student population is 26,574. Of the total enrollment 64.7% are Caucasian, 25.2% African-American, 2.8% Asian Pacific, and 0.2% Native American. Thirty-eight percent of the student population is considered to come from low income families.

After a lengthy trial, the local school district was found guilty of discrimination against minority students over the past 30 years. In an attempt to remedy this problem, the court order states that the district must desegregate its schools. In order to comply with the guidelines of the lawsuit a plan called "Controlled Choice" will be implemented beginning in the 1997-1998 school year. This will drastically alter the student population in the elementary schools.

National Context of the Problem

Inadequate motivation and reduced student academic achievement have long been recognized as a problem associated with education. Motivation to learn has been a major area of concern among educators (Hancock,1994). There are several factors that contribute to the national problem of inadequate motivation. Some of these factors include students' individual perception about learning, peer influences, reduced parental involvement, and other environmental and social issues.

A student's individual perception about school and learning has been labeled in many different ways in research literature.

Many studies address whether students believe they have the ability to perform a task (Pintrich & DeGroot, 1990). Teachers often feel these perceptions are determined by past experiences and are very difficult to change.

Peer influence is another very important factor among adolescents and should be addressed in planning classroom management and classroom goals. According to Wentzel (1989), social responsibility goals distinguish high-achieving students from low achieving students. For example, low-achieving students will settle for the short-term, easily attainable goal to have fun with friends rather than pursue the more difficult long-term goal of learning algebra. Education must allow students to pursue academic goals, social interaction goals, and social responsibility goals to motivate student behavior.

Students also vary according to the dynamics of their environment. This could be due to family or community influences, including such things as family structure, geographic location, and socio-economic factors. To understand student academic achievement it is necessary to obtain measures of their interests, attitudes, and specific motivations (Boyle, Start, & Hall, 1989).

Research establishes the fact that concerns of inadequate motivation transcend time, geographic location, and social standing. We must remember the most significant force in motivating students is their belief in their capacity to be successful (Costa, Bellanca, & Fogarty, 1992).

Chapter 2

PROBLEM DOCUMENTATION

Problem Evidence

The researcher's targeted group includes 28 seventh grade students from the school site . In order to document the extent of inadequate student motivation, observation checklists of students' time-on-task, observation checklists of students actively engaged in class participation, attendance rates, and ongoing journals of classroom behaviors have been recorded over a three week period of time.

An observation checklist of students' time-on-task and a checklist of students' class participation (Appendix A) were developed by the researcher to aid in the recording of specified behaviors. The targeted students were observed by the researcher during instruction time over the course of the first three weeks of the 1996-1997 school year. The students were given directions and instruction and given time, in class, to work. The researcher used that time to observe the students as they worked. A summary of the researcher's observations of students' time-on-task and the number of incidents by the targeted students is presented in figure 1.

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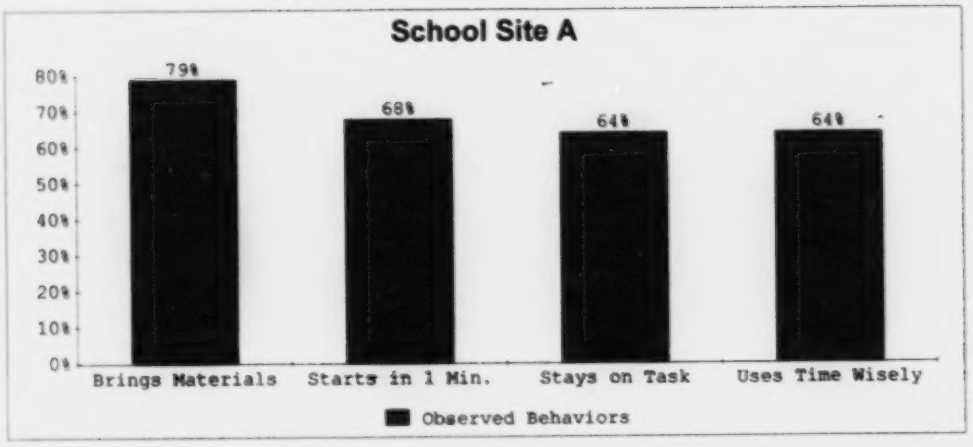

Figure 1. Categories and frequency of students on-task behaviors for the targeted class during the first three weeks of the 1996-97 school year.

Figure 1 shows almost 80% of the students bring their materials for class. These data also indicate approximately 70% of the students start on time, 64% stay on task, and more than 60% use their time wisely in class. The researcher interprets that bringing materials and starting a task within one minute after it is assigned demonstrates extrinsic motivation or possibly compliant behavior. The researcher also interprets that staying on task and using time wisely are more accurate measures of intrinsic motivation. The students at School Site A had a 15% drop from "brings materials" to "uses time wisely."

A summary of the teacher's observation of students' class participation and the number of incidents by the targeted students is presented in figure 2.

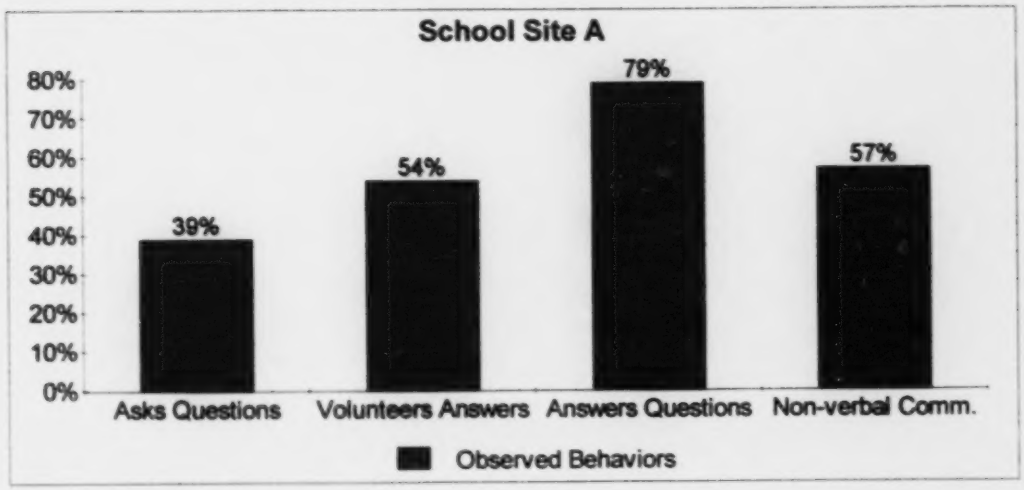

Figure 2. Categories and frequency of class participation for the targeted classes during the first three weeks of the 1996-97 school year.

Figure 2 shows that close to 40% of the students in the targeted group ask questions during a lesson. These numbers indicate the percentage of students who are intrinsically motivated to seek further knowledge.

Figure 2 also shows that students' willingness to volunteer answers and to answer questions when called upon indicate that students are more apt to comply with standard classroom

expectations. The number of students who volunteer answers is close to 55%. Regarding the number of students who answer questions during lessons, figure 2 shows that almost 80% of the class participates.

Over fifty-five percent of students in the class show different types of nonverbal communication during lessons. The types of nonverbal communication observed by the researcher included eye contact, smiling, head nodding, and other types of body language that indicate active listening.

These data reveal that most students in this study will engage in necessary class activity. However, very few of the students exceed teacher expectations. This may indicate compliance of students due to the possibility of extrinsic rewards when doing the required work, or perhaps even due to the fear of consequences if the minimal requirements are not met.

Student attendance rates have also been documented for the first three weeks of the school year. As expected, attendance is at a high level possibly due to the newness of the school year as well as students forming new relationships. The class observed by the researcher has an average attendance rate of 96%. The chronic truancy rate of the school is over 10%. Chronic truancy is defined by the Illinois State Board of Education as Chronic truants are students who are absent from school without valid cause for 10% of the total school days" (School Site A Improvement Plan, 1995).

A syntheses of the researcher's journal over the three-week

period of time finds student behaviors that the researcher interprets to be evidence of inadequate motivation. Tbe behaviors observed fall into three general categories. The three categories include: socialization, apathy, and student ownership.

The first of these categories is socialization among students. This category is characterized by documented behaviors such as: excessive talking, talking at inappropriate times, and inappropriate peer interaction.

The next category observed is general apathy. Examples of this category include: limited attention span, unengaged body language, and assignments displaying minimal effort.

The third category observed is insufficient student ownership. Tardiness, missing and late assignments, and being unprepared for class are examples of this category.

Probable Causes

The literature suggests several underlying causes for inadequate student motivation. The causes identified can fall into the following categories: a decrease in or negative influence of parental involvement, an unhealthy living environment, social hindrances, and insufficient school curriculum and teaching methods.

The first probable cause, a decrease in parental involvement or negative parental involvement, may occur for several reasons. What was once known as the nuclear family is now a family that may include two working parents, single-parent families, adoptive families, or remarried families (Scherer, 1996).

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Because of the rapidly changing society and economy, parents have a more difficult time meeting their own individual needs than those of the family. Much more time is devoted to working so that parents can make sure that the children have their basic needs met. This means that children are left alone and are forced to become independent at a very early age. Many parents cannot or choose not to take what little time they may have to become involved in their child's education (Scherer, 1996).

In addition to the changing family, the way parents respond to a child when he or she misbehaves can have a major influence on the child's future development and can contribute to problems which occur in the classroom. Self-concept is developed in the home environment, and many parents do not have sufficient skills to help children who live in unstable homes (Curwin & Mendler, 1988).

The relationship that a child has with his or her parent(s) will also greatly influence the way in which the child responds in school. When a child has developed a sense of security in the home, the
level of competence, control, and ways of coping in school are all affected in a positive manner (Ryan, Stiller, & Lynch, 1994).

More and more schools are reaching out for support from families by providing parenting classes, doing home visits, using family members as tutors, and providing social services for their children. Still, many parents simply so not have time or may for some reason feel reluctant to get involved in their child's

education. Whatever the cause may be for the decrease in or negative influence of parental involvement, it is important to remember that "Perhaps the largest single influence on children is the quality of their home life" (Curwin & Mendler, 1988, p.6).

The second probable cause related to inadequate motivation is an unhealthy living environment. Other than the home, the primary environments of a child are the neighborhood and school. Increased deterioration of sub-communities appears to be one cause of decreased motivation among children who reside in these areas. Children seek to be accepted and have a voice in issues that effect them.

Experts say that groups such as gangs, offer both a sense of belonging and a sense of empowerment for children (Garcia, 1994). Groups such as this do not enhance positive attitudes toward school. Manning (1996) states that children often migrate to peer groups that put higher value on sports and social success than on academic success. As a result, children may spend more time engaging in activities that enhance athletic skills rather than academic

skills. These peer groups may also pressure children indirectly to neglect studies and concentrate more on socialization.

Manning (1996) also suggests that the needs of a caring community are not being met for some children. Therefore, it may be a responsibility of the schools to create a caring atmosphere. Garcia (1994) states, "A safe, orderly, and secure environment is conducive to learning and academic achievement" (p.22). Schools

appear to be a place where children can escape the streets. The reality is, because of policies created to prevent gangs and their related activities, they actually guarantee members of these groups will continue to reject school (Garcia, 1994). Garcia (1994) also states that half of the violent crimes against children 12 to 19 years of age happen at school. In this type of environment, one in 12 children may stay home from school for fear of being violated. The thought of violation overrides the desire to be educated. Garcia (1994) states, "That in an environment such as this teachers can't teach and students can't learn. An unsafe school campus thwarts the learning process, stifles creativity, and paralyzes the imaginative ideas of children" (p.23).

The classroom environment may also decrease the drive of children to become educated. Children have a need to feel empowered. For example, allowing students to give input in the layout of the classroom creates a sense of ownership. It is the lack of ownership in the classroom which plays an instrumental role in a child's unwillingness to turn on to school (Wheeler, 1994).

Another aspect of the classroom that may cause decreasing motivation is insensitivity to racial and cultural backgrounds. Research suggests that minority students, including those who speak another language, struggle in classrooms where they feel unaccepted by others (DeVoe, McMillen, & Zimmerman, 1996; Garcia, 1994).

Neighborhoods, schools, and groups such as gangs aren't the only environments that effect a child's desire to be educated. Not every child is negatively affected by these environments. However, these seem to be the primary areas that affect some children.

Another probable cause for inadequate motivation in schools are social hindrances. Success in education for students requires many more components besides text books and homework. The social aspects of a child's education are equally important as well as directly connected to a child's academic achievement. According to Wentzel (1989) "Social skills and behaviors are strong predictors of grade retention, placement in special education, and dropping out, independent of intellectual ability" (p.131). During their school years, students are faced with many situations that challenge their social success.

Teachers many times create situations which can inhibit motivation in regard to social development. An example of this is a teaching method called whole-class question-answer. This occurs when the teacher calls on one student to answer a question (Kagan, 1989). This type of teaching tactic creates a competitive classroom structure, pitting students against each other as they seek recognition from the teachers. Kagan (1989) states, "The failure by one student to give a correct response increases the chances for other students to receive attention and praise. Thus, students are set against each other, creating poor social relations and peer norms against achievement" (p.13).

Another social hindrance is the underdevelopment of social skills. The four main social skill areas needed for maximum student effort are communication, trust, leadership, and conflict resolution (Bellanca & Fogarty, 1991). Unfortunately, people simply are not born with social skills. These skills also do not naturally form and develop when one is placed in a task group or other social situation (Johnson & Johnson, 1989-1990). Social skills must be taught, as well as continually practiced, in order to maintain them. Not all children learn the appropriate social skills at home. Therefore, not every student comes to the classroom equipped with the necessary skills.

Research also suggests that a child's social interactions with peers can have negative effects on academic achievement. According to a recent study, one of the largest impacts on a student's academic performance is the student's friends (Leslie, 1996). Since students are exposed daily to negative social experiences, it is inevitable that negative attitudes result. Leslie (1996) also states, "The prevalent attitude among students is that "getting by" is sufficient, and the study infers that there is considerable pressure on students to underachieve" (p.72). Students, particularly adolescents, are easily swayed by peer influences. Another theory of why some students are underachieving academically may be due to the idea that to achieve is somehow unfashionable (Latanision, 1995). Regardless of its source, social hindrances are a reality for almost every student. Interactions with peers, development

of social skills, and the social structure of the classroom are all a part of a child's academic experience. How a child deals or copes with these social challenges has an impact on his or her academic performance.

The data compiled by the researcher demonstrate a low interest level in classroom activities by a number of students. Another probable cause for inadequate motivation could be the school's curriculum or a teacher's individual teaching strategies. The literature suggests both of these elements can contribute to a low level of student interest.

According to Wasserstein (1995), there are five maxims that have grown out of surveys that were administered to middle school students in Englewood, Colorado. These include: "1. Students of different abilities and backgrounds crave doing important work. 2.Passive learning is not engaging. 3.Hard work does not turn students away, but busywork destroys them. 4.Every student deserves the opportunity to be reflective and self-monitoring. 5.Self-esteem is enhanced when we accomplish something we thought impossible, something beyond us" (Wasserstein, 1995, p.43). This research confirms the relevance of the students' perspective.

The literature suggests teachers concur with many of these same maxims. A survey of teachers by Zahorik (1996) resulted in three similar conclusions. The first conclusion was that generating situational interest is an important teacher activity. The second conclusion stated that the hands-on approach is the primary method that teachers use to stimulate interest. Other

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methods used were personalized trust, group tasks, teacher enthusiasm, and practical tasks. These other methods were thought to incorporate students' self-governing abilities. The third conclusion stated that teachers infrequently use content ideas to establish student interest (Zahorik, 1996). These conclusions are very similar to the ideas of both the students surveyed and the journal notes of the researcher involved in this study.

This research questions the traditional practices of education. In summary, lecture as a form of teaching content material is ineffective unless relevancy can be conveyed to all students. Dictatorial classroom management is also questioned in the research. "Boss-teachers and administrators constantly lament that students are not motivated, but what they are actually saying is that they do not know how to persuade students to work" (Glasser, 1992, p.39).

CHAPTER 3

THE SOLUTION STRATEGY

Literature Review

A review of the literature revealed many findings which contribute to inadequate student motivation. Several methods should be considered when constructing an intervention to promote positive educational experiences in an attempt to increase academic achievement. The professional literature suggests a number of solutions that address student motivation and achievement. The five solutions discussed in the following portion of chapter three include: multiple intelligences, student choice, cooperative learning, intrinsic and extrinsic factors, and emotional climate of the learning setting.

The first strategy described to increase student motivation is varying lesson plans to meet students' needs. In traditional classrooms the teacher makes the lesson plans and is the focal point of all interactions. This can work well for a dynamic, creative teacher who includes a variety of activities that the students enjoy. Unfortunately, not all teachers are capable of doing this on a regular basis. Many teachers, including hard working ones, fall into a pattern which they repeat daily.

According to Strong, Silver, and Robinson (1995), unchallenging, repetitive assignments decrease motivation. A literature search revealed many strategies to increase motivation by tailoring lessons to students' interests and learning preferences.

A place to begin any research for variety in the classroom would be Gardner's theory of multiple intelligences. This theory, first published in 1983, states that each individual possesses several different and independent capacities for solving problems and creating products (Chapman, 1993). The seven intelligences are Verbal/Linguistic, Musical/Rhythmic, Logical/Mathematical, Visual/Spatial, Bodily/Kinesthetic, Intrapersonal, and Interpersonal. Recognizing these intelligences is one way to provide variety in classes. Teachers can adapt their lessons to more adequately meet students' needs.

According to Chapman (1993), multiple intelligences can be understood by a shoe metaphor. Each child has all of the shoes in his or her closet, but some fit more comfortably than others. If the shoe fits more comfortably, then a student will shine in that intelligence. If the shoe fits too snugly, the owner will want to choose a more comfortable pair. To meet the diverse needs of today's students, we need to allow each student to wear the shoes, at least occasionally, with which they feel most comfortable.

There is a wide range of activities that can be used effectively in each different intelligence. For instance, in the verbal/linguistic intelligence Chapman (1993) lists 31 different activities that incorporate this intelligence. Some examples of these activities would include the use of computers, magazines, VCRs and televisions, dramatic readings, and peer tutoring. Educators can also target more than one intelligence in a lesson

to ensure that a greater number of students achieve their goals.

The second solution, student choice, allows students to select lessons that reflect their individual learning style. A research project addressing student motivation began ten years ago by Strong, Silver, and Robinson (1995). They started by asking teachers and students what work they found engaging and what work they disliked. A distinct pattern quickly emerged in their responses. Work that stimulated their curiosity, allowed them to express their creativity, and built positive relationships with others was considered engaging. Teachers and students both disliked work that was repetitive, that required little thought, and was forced on them by others. From their research, Strong, Silver, and Robinson (1995) came up with a model of student engagement called SCORE. This is an acronym that comes from four essential human needs:

Success - the need for mastery

Curiosity - the need for understanding

Originality - the need for self-expression

Relationships - the need for involvement with others

Energy - this will build under the right classroom conditions

Teachers need to try to address these needs in their daily lessons. Written questionnaires can be used to determine student interests and find ways to integrate these into the curriculum. Success, curiosity, and originality can be addressed by task choices. These might include which book to read, which graphic

organizer to use, which resource materials to read, and what product to use for assessment (Chapman, 1993). The authors suggest cooperative learning as a way to address the need for relationships (Strong et al., 1995). The model suggests that if this plan is followed, student energy will be the end result.

The third possible solution to the problem of student motivation in the classroom, as suggested by the researchers, is the use of the cooperative learning instructional approach as a tool for teaching. In 1990, Slavin found that cooperative learning was successful in urban and rural schools in that students learned not only to cooperate, but learned to like each other regardless of ethnic or economic background. Students also showed an increase in academic performance (Slavin, 1991).

Bellanca and Fogarty (1991) stated that research has shown that the cooperative learning model is positive in its effects and its approaches are beneficial as well as appropriate, for all curricular areas. Cooperative learning encourages higher-order thinking, problem solving, and develops social skills and positive attitudes. Cooperative learning also allows for group interaction, shared roles, reflection, and reliance on each other instead of the traditional lesson in which the student works alone, is responsible for the whole task, promotes little or no reflection, and has only him or herself to rely on (Bellanca & Fogarty, 1991).

According to Johnson and Johnson (1989-1990) one of the requirements of cooperative learning is the direct teaching of

social skills. Developing social skills helps in keeping good psychological health (Johnson & Johnson, 1989-1990).

There are five stages in teaching social skills as described by Bellanca and Fogarty (1991). The first stage is called the hook. The hook lessons are the foundation of teaching social skills. To gain students' attention, the teacher provides some type of experience to "hook" the class. This may be a role play or a structured group activity such as a people search (Bellanca & Fogarty, 1991).

Next, the teacher guides the students in creating a T-chart or web that uses words to describe or explain the social skill being taught. This is called the teaching stage. The T-charts and webs can then be made into charts to display in the classroom or students can make individual charts (Bellanca & Fogarty, 1991).

Providing guided skill practice is the next stage in teaching social skills. If active listening is the skill being focused on, this can be taught in a number of ways. For example, students can paraphrase each others' ideas either in pairs or to a larger group. After teaching a specific skill over a period of time the teacher can build the component in a number of ways. For example, if the lesson is a group activity and the social skill being taught is encouragement, students could list five encouraging words or actions that they heard or saw during the activity (Bellanca & Fogarty, 1991).

Observations are the next stage in teaching social skills. This can be done using teacher checklists or teacher assigned observers. While the class is working on an assignment it is the observer's job to record samples of the social skill being taught at that time. After the assignment the teacher would then recognize the positive examples recorded by the observer, further reinforcing the social skill. With enough practice over time the social skills will begin to become automatic (Bellanca & Fogarty, 1991).

The final stage in teaching social skills is the use of a group reward system. Examples of this include certificates, marbles in a jar, or coupons which can be used for free time or extra credit towards a grade (Bellanca & Fogarty, 1991).

McDaniel (1985) stated that to promote motivation, students must actively be taught how to cooperate in order to reach academic goals. These skills do not come naturally to most students, especially in a traditional classroom setting. In the cooperative classroom students can build supportive relationships and strong group morale (McDaniel, 1985).

The fourth possible solution when attempting to improve student motivation is the use of extrinsic and intrinsic rewards. The concept of extrinsic and intrinsic rewards used to motivate students to learn is a topic that has spawned debate and controversy in the educational community (Strong et al., 1995). Most educational experts and researchers agree that motivation towards academic tasks that comes from within a student is the

most positive and effective for the learning process. Students who are intrinsically motivated are, according to research, more inclined to seek and engage in tasks and activities for interest and enjoyment (Tripathi, 1992). The overall concern that most researchers have towards external motivators whether punishment or rewards, is the idea that continually rewarding someone for performing a given task will diminish the person's interest in the task (Tripathi, 1992; Brandt, 1995).

Not all experts share the sentiment that external motivators should be abolished. They contend, that when used under certain conditions and circumstances, extrinsic rewards can help to enhance a person's intrinsic motivation (Tripathi, 1995; Strong et al., 1992).

One theory held by Stipek (1988) suggests extrinsic rewards can be used effectively in specific situations. Depending on the engagement level of the task, extrinsic rewards should not be introduced. Tasks that are enjoyable and interesting do not require the involvement of extrinsic rewards. During tasks that are moderately difficult and not particularly boring, extrinsic rewards should be used only when necessary and should be steadily withdrawn as the topic is covered. Stipek (1988) also mentions that students must be made aware of the immediate use of the information and skills being learned. Finally, he concludes that during repetitive and boring tasks, which should be kept at a minimum, teachers may find it necessary to offer extrinsic rewards to motivate students.

Perhaps one of the most staunch adversaries of the use of external motivators, particularly rewards, is Kohn. Kohn argues that rewards are damaging particularly when the task is already intrinsically motivating (Brandt, 1995). He also holds firm to the idea stated earlier regarding the decrease of interest toward performing a task when continually rewarded. It is Kohn's (1993) belief that one cannot motivate another. Motivation is something that comes from within. Kohn suggests that teachers concentrate on three ideas to help promote intrinsic motivation: content, community, and choice. Students who are in a comfortable and safe environment, who are given engaging and relevant tasks, and who are allowed to make choices are, according to Kohn (1993), most likely to be intrinsically motivated to learn.

Chance (1992) expresses the positive aspects of extrinsic rewards. Chance stated "To teach without using extrinsic rewards is analogous to asking our students to learn to draw with their eyes closed" (1992,p.207). Chance (1992) agrees that rewards can reduce motivation when used inappropriately yet still holds fast to the positive effects they offer when used with care. In his article, "Rewards of Learning", he lists a variety of guidelines recommended by experts to follow when using extrinsic rewards to motivate students. Chance (1992) contends that extrinsic rewards are the most powerful reinforcement tool teachers have in the classroom.

The debate regarding intrinsic versus extrinsic motivation is one that undoubtedly will be the topic of much research for years to come. The underlying purpose of all the research

surrounding this topic is the same; the desire to provide students with the best education possible. It is a teacher's responsibility to design lessons and create an atmosphere that ensures optimal learning opportunity.

The fifth possible solution to increase student motivation is improving the climate of the classroom. The educational climate of American schools may play a more important role in motivating students than once thought. "A joyful classroom makes students more apt to learn how to successfully solve problems in potentially stressful situations" (Sylwester, 1994, p.61). Recent developments in cognitive research are uncovering evidence that may prove helpful in engaging students in their learning.

It is known that one's attention is driven by emotions and attention plays a large part in learning and memory (Sylwester, 1994). Does this mean unmotivated students lack emotions and therefore can't learn? Certainly not. However, Sylwester (1994) states that emotions are, most often, the best indicator of behavior. Teachers need to be aware that inappropriate behavior may be a result of unchallenging, repetitive work that doesn't reach student's emotions in a positive manner. Therefore, a student's emotions can allow him/her to neglect certain thoughts of a situation. Students then act on instinct based on the incoming information. Irrational behavior can result from acting on instinct alone (Sylwester, 1994). He also states that inappropriate behavior reduces attention which in turn affects grades.

Low grades in school create an increase in student stress. Sylwester (1994) mentions that an emotionally stressful school environment can produce negative effects on student learning. United States schools may be overlooking what could be a major piece in increasing motivation and learning amongst students. Many Americans believe that Eastern Asian students face the most emotional stress. According to an article written by Bower (1994), this isn't necessarily true. He states that American students lack the parental support and feel more pressure to excel in extracurricular activities. In a survey by Amen and Reglin (1992), students were found to be emotionally stressed in five main areas. They are: 1) stressed to do well in school, 2) stressed to excel in extracurricular activities, 3) stressed to deal with sick family members, 4) pressured to have intimate relationships, which may even increase pressure to have sex, and 5) pressured by peers to experiment with drugs and alcohol. Emotional stress of our students is not something educators and parents can take lightly. This stress must be dealt with properly or drop out rates, crime rates, and drug usage will continue to increase (Amen & Reglin, 1992).

Teachers are always trying to find what works best for their students, but sometimes the obvious is overlooked. Many teachers know about student emotions and students' stress, so maybe it's time to take them more seriously as a problem for inadequate motivation.

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As previously discussed, the literature suggests five possible solutions to increase student motivation and achievement. The five solutions: multiple intelligences, student choice, cooperative learning, intrinsic and extrinsic rewards, and educational climate of learning, will be incorporated into the action plan.

Project Objectives and Processes

As a result of a program to increase students' ownership in their learning, during the period from September 1996 to January 1997, the targeted classes will increase academic participation as measured by teacher journal entries, observation checklists of time-on-task, observation checklists of class participation, and students' attendance records.

1. Lessons that involve cooperative learning activities will be developed and implemented in the classroom.

2. Learning activities that address students' interests will be developed for mathematics.

3. Materials that foster student involvement in presentation of lessons will be developed for mathematics.

Project Action Plan

Action plan for the intervention:

I. Lessons that involve cooperative learning activities will be developed and implemented in the classroom.

- A. Teacher assigned cooperative groups
  - 1. Base groups of three to four students
  - 2. Heterogeneous groups
- B. Bonding activities
  - 1. People search
  - 2. Group name/logo
  - 3. Who am I?
  - 4. Snapshots
  - 5. Business cards
  - 6. Me bag/magazine
  - 7. Four corners

8. Picture frames

C. Social skills
   1. Cooperation
      a. Share materials
         1. T-Charts
         2. Role playing
         3. Class lists
         4. Think-Pair-Share
      b. Take turns
      c. Do your job
      d. Consider other's ideas
   2. Encouragement
   3. Active listening/communication
      a. Eye contact
      b. Use names
      c. 6" voices

D. Group roles
   1. Class discussion of importance and description of roles
      a. Recorder
      b. Encourager
      c. Materials manager
      d. Time keeper
      e. Presenter
      f. Artist
      g. Checker

E. Scheduling
   1. One full, formal cooperative lesson per week
   2. Social skills reinforced daily
   3. Implementation to take place during the first semester (September-January) of the 1996-1997 school year

II. Learning activities that address students' interests will be developed for subject areas.

A. Multiple intelligences
   1. Verbal/linguistic
      a. Computer instruction
      b. Hands-on experiments
      c. Storytelling
      d. Graphic organizers
      e. Games
   2. Musical/rhythmic
      a. Songs, cheers, raps, poems
      b. Background music
      c. Music mnemonics
      d. Unison recall

3. Logical/mathematical
    a. Puzzles
    b. Games
    c. Venn diagrams/matrices
    d. Computers
    e. Experiments in labs
    f. Use of manipulatives
    g. Calculators
    h. Challenge tasks
    I. Time lines and outlines
4. Visual/spatial
    a. Posters, charts, graphics, pictures
    b. Illustrations, sketches, drawings, paintings
    c. Overhead, board
    d. Active imagination
    e. Demonstrations
5. Bodily/kinesthetic
    a. Role playing
    b. Centers
    c. Outdoor education
    d. Sports/games
    e. Exercise
    f. Interviews
    g. Projects
6. Intrapersonal
    a. Problem solving
    b. Goal setting
    c. Journals/reflection time
    d. Centers
    e. Independent learning times/assignments
    f. Self discovery
7. Interpersonal
    a. Video
    b. Computers
    c. Think-Pair-Share
    d. Jigsaw
    e. Creative tasks; collages, songs, poems, comic strips
    f. Cooperative games

B. Project-based learning
1. Student choice to work alone or with others
2. Choice of final product
    a. Oral presentation
    b. Written report
    c. Exhibition
    d. Play
    e. Song

C. Journals
   1. Reflection
   2. Student input for presentation of lessons
   3. Record keeping
   4. Predictions/hypothesizing
   5. Transfer beyond the classroom
   6. Transfer between subject areas
   7. Teacher/student communication
   8. Personal entries
      a. Stories
      b. Feelings
      c. Opinions
      d. Lecture/movie notes

D. Traditional
   1. Lecture
   2. Independent study
   3. Worksheets
   4. Video/filmstrips
   5. Whole group activities
   6. Written tests

III. Materials that foster student involvement in presentation of lessons will be developed for subject areas.

A. Graphic organizers
   1. PMI
   2. KWL chart
   3. Web
   4. Venn diagram
   5. T-chart
   6. Flow chart
   7. Human graph

B. Role cards

C. Office supplies
   1. Newsprint
   2. Markers
   3. Spiral notebooks
   4. Other

Methods of Assessment

In order to assess the effects of the intervention, four measurement tools will be used. The teacher will record changes in attendance rate of students. Observation checklists of students' time-on-task will be recorded by the teacher. Observation checklists of students' actively engaged in class

participation will also be kept. Finally, the teacher will keep an on-going journal of classroom behaviors and academic achievement.

Chapter 4

PROJECT RESULTS

Historical Description of Intervention

The purpose of the action research project was to increase student motivation for learning. The intervention began in September, 1996, and continued to January, 1997. Cooperative learning activities, lessons incorporating the multiple intelligence theory, and student choice of activities and assignments were selected as ways to achieve the objective.

The original action plan called for cooperative learning activities, which were used to teach both social skills and classroom curriculum content. Base groups were set up early and task groups, which were set up randomly, or ahead of time, were used for some isolated cooperative lessons. A bonding activity was used approximately once every ten days to two weeks to orient the different students within the new task groups (Appendix B). However, the length of many of the lessons didn't allow for these bonding activities to be done before every lesson. As the cooperative lessons were implemented, the teacher/researcher decided to concentrate on two main areas of the social skills plan. These two areas included encouragement and cooperation. The decision to concentrate on encouragement was made after the teacher/researcher

noticed that students were using put-downs and being critical of one another when working together in the groups. The problem with cooperation was obvious when it was noticed that several students seemed unwilling to even hear one another's ideas, let alone accept or try the idea. As a result of concentrating of these two main areas of need, other parts of the original plan were given less emphasis, or in some cases omitted.

During the cooperative lessons, roles were given to each member of each group. Originally, the plan called for groups of three or four, but there were five to six times when the teacher/researcher believed pairs would be more appropriate. "Pairs clocks "(Appendix C) were used two to three times to determine which two students would work together. Because group numbers ranged from two to four persons, not all roles were used in every lesson.

The scheduling set up in the plan called for one full cooperative lesson per week. Unfortunately, this goal of the program couldn't always be achieved as planned. One full lesson per week was hard to accomplish, due to unforeseen circumstances such as, assemblies, field trips planned by the team, or teacher absenteeism. Shortened weeks also became a factor in the inability to achieve one lesson per week. Many time the teacher/researcher would plan a test or quiz during a shortened week to allow for more grading time, and the repercussion was the elimination of a cooperative lesson.

The teacher/researcher used multiple intelligence lessons to allow students to make individual choices and decisions on material presentation. Students feel empowered by their decision making, an important factor in learning motivation. Therefore, the theory of multiple intelligence was implemented as a plan to improve student motivation in learning.

There are seven areas of intelligence listed in the original action plan for implementation. All seven were represented at some point during the plan, however, not all areas were addressed equally due to their inappropriateness, inaccessibility, or lack of time. For example, outdoor education, which relates to the bodily/kinesthetic intelligence, was difficult because of the cold weather that plagued us for the majority of the project. Access to computers, which enhance the verbal/linguistic intelligence, was limited so effects on student motivation were difficult to measure. A more general area of the plan that was, in a sense, neglected, was the musical/rhythmic intelligence. Due to the teacher/researcher's lack of ability and discomfort in this area, this musical/rhythmic intelligence was used less in presenting lessons. Students were, however, given different opportunities to use the musical/rhythmic area to display knowledge of their learning.

Project based learning was also in the original plan for implementation. Two projects were assigned for the

purpose of giving students a way to express what they had learned as individuals (Appendix D). Because of a lack of time, not as many projects were assigned as were planned.

Another area related to the multiple intelligence theory that was addressed during implementation was journals. Early in the program, journals were used for student reflections, which utilizes the intrapersonal intelligence. Journals were also used for hypothesizing, for those who are mathematical/logical and student/teacher communications to increase the use of the interpersonal intelligence. This use of the journals was a direct result of the unit that was being studied at the time. Later in the program, students used their journals for recording daily notes, examples, and grades. Due to the introduction of other tools, journals were not used as a means to record test answers, as was part of the original plan, The teacher/researcher found it easier to grade tests by using a standardized answer sheet. The action plan mentions the use of journals for whole group responses. As a way to decrease the amount of paper work, the teacher/researcher found it easier to collect one response paper from a group, rather than the entire group's journals. One could, however, compare the group response to that of an individual journal response by each member.

Materials to foster student involvement in lesson presentation were used during the project. Graphic organizers were used to meet the needs of students who

learned best through the use of visuals (visual/spatial intelligence). Five graphic organizers (Appendix E), mentioned in the plan, were used more than once, but two were not used at all. Time did not allow for instruction in the use of those graphic organizers, therefore, they were excluded. Newsprint, markers, scissors, and rulers were supplied by the teacher/researcher to aid with visuals. Spiral notebooks were on the students' supply list for school and supplied by each individual student.

Although the original action plan was lengthy, much of the plan was implemented during the duration of the project. Some deviation had taken place, mostly due to a lack of time for adequate implementation.

Presentation and Analysis of Results

The targeted group of students involved in the duration of the project remained the original 28 students. The results of the project's outcome, over the duration of time, were recorded by means of observation checklists of students' time-on-task, observation checklists of students involved in class participation, teacher's record book of absenteeism, and an ongoing journal of the teacher/researcher's reactions.

Using the already developed observation checklists, observations were recorded of students' time-on-task and class participation for the duration of the project. As noted in chapter two, students were given directions and instructions for an activity, then given the cue to begin

the task. The teacher/researcher used this time to observe classroom behavior. Figure 3 shows a comparison of the pre-observation checklists and the final outcome of the students' time-on-task.

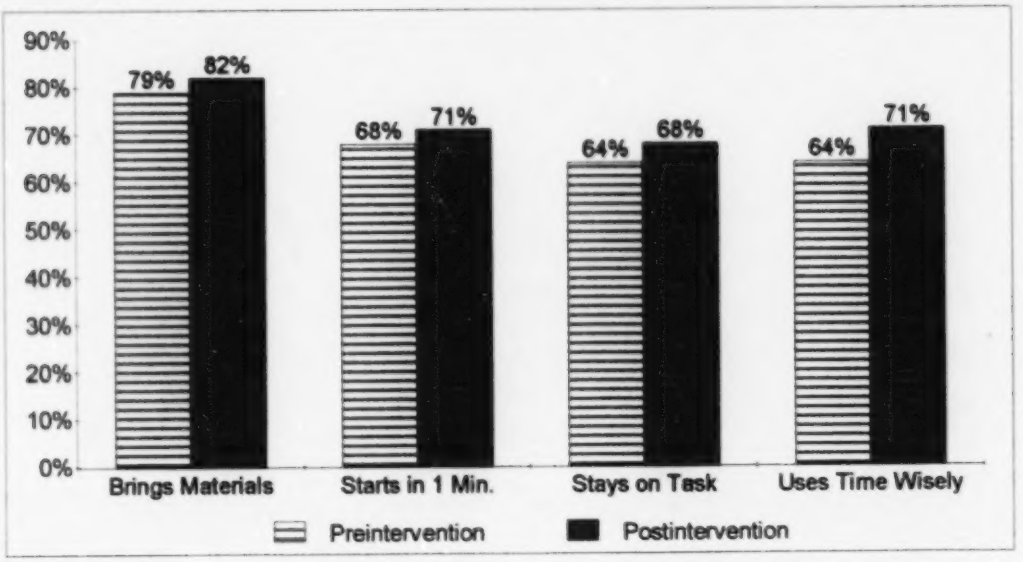

Figure 3: A comparison of the frequency of students' time-on-task for the pre-project three week period at the beginning of the '96-'97 school year and the results at the end of the implementation period.

Figure 3 shows that there was a 3% increase in both the categories of "brings materials" and "starts in one minute." In chapter two, the researcher mentioned that these two categories are better measures of extrinsic motivation or compliant behavior than internal motivation. A slightly higher increase was seen in "stays on task,"

which, along with "uses time wisely," are believed by the researcher to be better indicators of internal motivation. The largest increase, almost 10%, was noticed in the area of "uses time wisely." The higher increases in the latter categories may be related to the intervention activities.

A second comparison was used to note the changes seen in the categories of students' class participation. Figure 4 resembles the changes the had taken place.

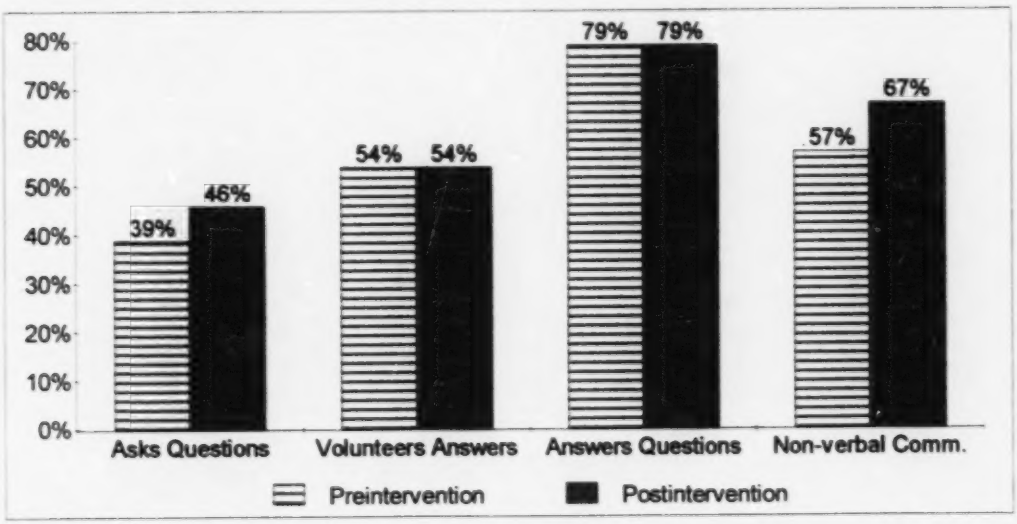

Figure 4: Frequencies are compared to show the changes noticed in the categories related to students' class participation.

As previously mentioned in chapter two, the researcher believes the area of "asking questions" shows a student's internal motivation to gain further knowledge. A minor increase of just over 5% can be seen in this area. Again,

increase of just over 5% can be seen in this area. Again, as previously noted, the categories of "volunteers answers" and "answers when called upon," are believed to be better indicators of the student's desire to comply with classroom expectations. There is no change in either of these two areas.

Figure 4 also shows the projects highest increase of any category observed. There was a 10% increase in the area of "nonverbal communication," an area that contains indicators of active listening skills. This increase could be a result of more students being focused and wanting to learn, factors of being intrinsically motivated.

Students' attendance rate and the targeted groups' chronic truancy rate were also recorded for the three week pre-project period and post-project period. A comparison of these figures is shown in figure 5.

The following figure (figure 5) shows that there was less than a 5% decrease in the attendance rate of students in the targeted group. It was mentioned in chapter two that the pre-project attendance rate of 96% may have been a result of the students' response to the newness of school. It's possible that the newness of school was a reason for the relatively high attendance rate. If so, one might believe that having less than a five percent drop in that rate would represent an effective intervention. An outbreak of influenza took place two to four weeks after students returned from winter break. This was at the time

absenteeism. If the influenza outbreak did effect the attendance rate, the belief of an effective program would be reinforced because of the minuet drop in percentage.

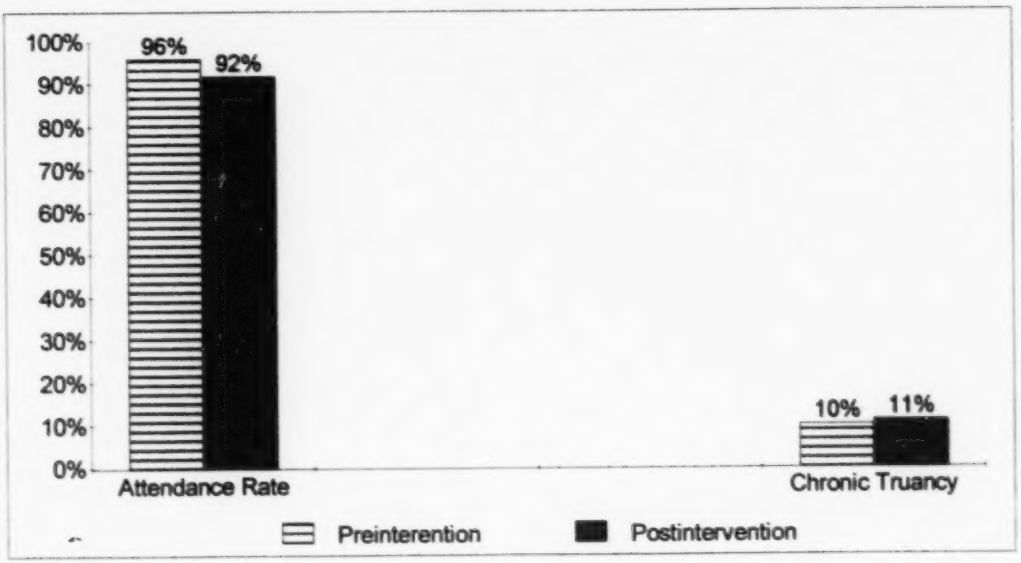

Figure 5: Student's attendance rate and chronic truancy rate from the beginning and end of the project are compared.

Conclusion and Recommendations

The targeted seventh grade students participated in a program, lasting from September, 1996 to January, 1997, aimed at increasing their motivation for learning. After reviewing the data presented in figures three through five, the teacher/researcher makes the following conclusions. Minimal increases were noted in those areas believed to be externally driven. The teacher/researcher suggests that these small increases are evidence of an effective program, because of the possibility of the students' requiring less

because of the possibility of the students' requiring less external motivation, while increasing their desire to seek knowledge for internal reasons. The previous statement implies success. The teacher/researcher prefers to note the relatively high increases in the areas mentioned as containing factors of internal motivation for learning.

Other evidence that leads the teacher/researcher to believe the project was effective is the slight decline in attendance rate and a microscopic increase in chronic truancy rate. The teacher/researcher suggests that if one could eliminate any effects that the newness of school and the prime flu season had on the attendance rate, there wouldn't have been any decline. Also, the targeted group included five students that fall into the 5% at-risk group that most schools have. Therefore, the teacher/researcher concludes the program was effective because the increase in chronic truancy included the same five students. After analyzing all the data presented, the teacher/researcher concludes that the program was effective.

As with any type of research, there are things that need to be revamped. The teacher/researcher recommends that a program consist of a less complex intervention with fewer components. It is difficult to determine which component had a direct effect on students' motivation. Time was also a factor in effectively implementing the program. A program such as this would require much more time to affect motivation.

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APPENDICES

APPENDIX A

Observation Checklist

Teacher:_____ Class:_____ Date:_____

Target Skill: Class Participation

+ = Student is participating
- = Student is not participating

Names of Students	Asks questions.	Volunteers answers.	Non-verbal communication.(e.g. nod, smile etc.)	Answers when called upon.	Comments
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					

Observation Checklist

Teacher:_____ Class:_____ Date:_____

Target Skill: Time-On-Task

+ = Student is on task
- = Student is not on task

Names of Students	Comes with necessary materials.	Starts task in one minute.	Stays on task.	Maintains involvement throughout class time.	Comments
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					

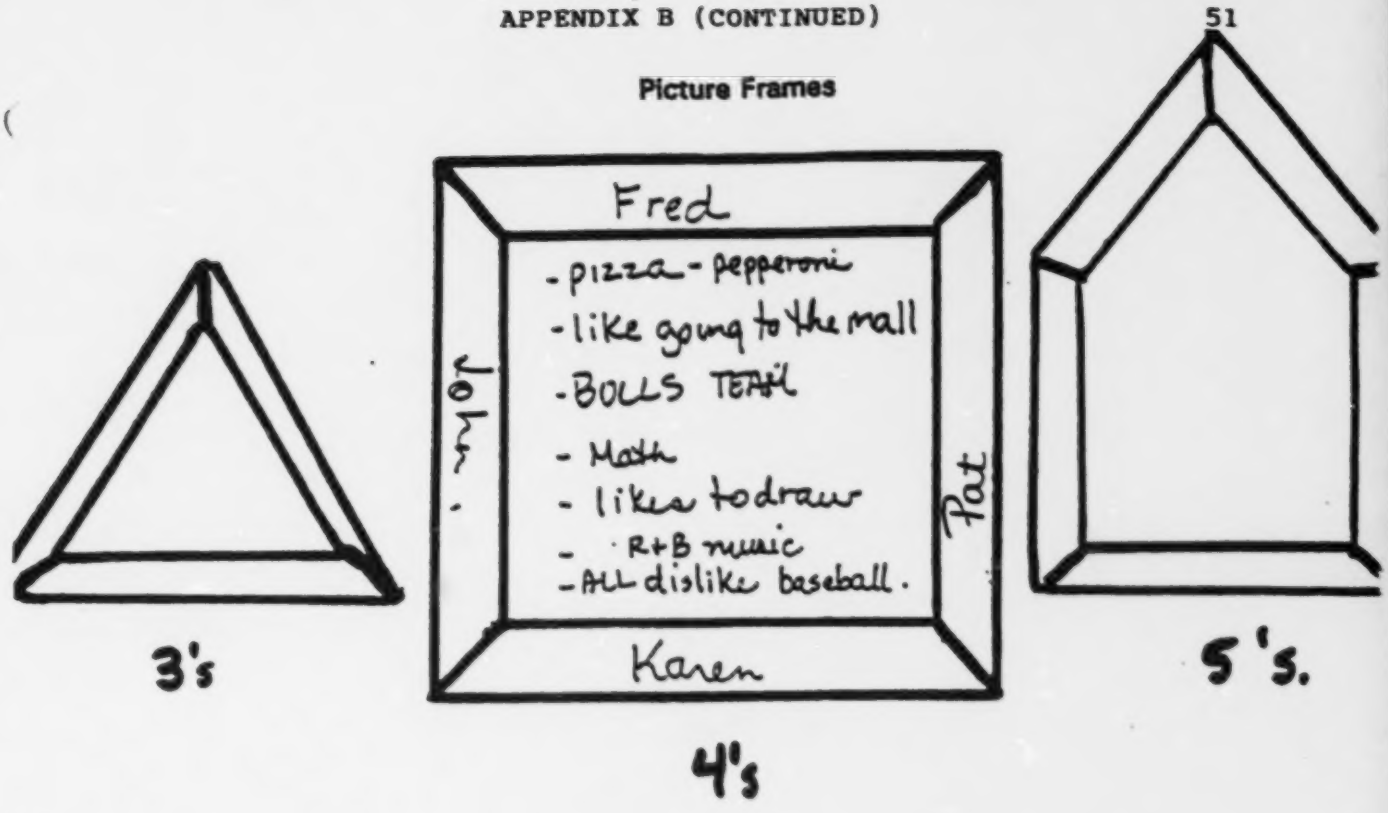
APPENDIX B

PEOPLE SEARCH

Find a person who can give the number...

1. Of sides on a pentagon_____
2. Of legs on 8 horses_____
3. Of innings in a baseball game_____
4. Of years in a decade_____
5. Of seconds in a minute_____
6. Of notes in an octave_____
7. Of wheels on a unicycle_____
8. Of factors for the number 15_____
9. Of inches in a yard_____
10. Of weeks in a year_____
11. Of the last date in September_____
12. Of months in the last half of the year_____
13. Of oranges in 5 1/2 dozen_____
14. Of sides on a stop sign_____
15. Of seasons in a year_____
16. Of pennies in $2.64_____

Picture Frames



This activity helps the students to find commonalities among each other.

1. Combine 2 interview pairs into a group of 4. (OPTIONAL 3's or 5's)
2. Each group needs a large piece of news print and 4 markers.
3. Each student's name is placed in the frame. 5-10 common interests are placed in the center. Give 5-10 mins.)

- **BRAINSTORM COMMON INTEREST AREAS ON THE BOARD WITH TOTAL CLASS.**

4. After 5-10 common interests are found have group make up a name for their group and a logo (based on commonalities) - Place on Newsprint.
5. Each group shares their frame with the rest of the class
6. After each group presents place frame on walls around the room for all to see.

* Turn to Your Neighbor and...(say/write/draw)
  a. days of week
  b. nouns in room
  c. words that end with "e"
  d. pairs of homonyms
  e. metric terms
  f. symbols for minerals
  g. parts of an auto engine

Students are randomly called upon to give/show group response.

2. Think-Pair-Share

The teacher asks a question, all students have time to think, the students talk in pairs, and finally some sharing takes place in the large group (Winner's Envelope for random, or volunteers tell what their partner said).

3. Pairs of Pairs

Each person writes a list of responses to a question:
  a. what I'd like to study about ___
  b. problems on the playground
  c. presents for Father's Day
  d. topics for report on Abe Lincoln

Two students are paired up and combine their individual lists. They take turns writing: one paper and one pencil. Then two pairs are paired up to combine two lists into one list: one paper and one pencil.

4. Advanced Pairs of Pairs

Students work in pairs to brainstorm as many ideas as they can on a topic for 3 minutes. One person writes: one paper and one pencil.

Possible topics: classroom rules; events for field day; rewards for work; consequences for unsatisfactory work; * possible math problems that equal 21; topics for creative writing

Then two pairs are put together and they combine lists: one paper and one pencil.

5. Learning Buddies

Base groups of 3-4 students who meet frequently to:
  a. * clarify, process information
  b. ask questions
  c. * translate information to practical situations
  d. review for test
  e. practice

6. Show & Tell / Bring & Brag

Instead of the whole class listening to everyone's reports, current events, book reports, etc., each student shares in small groups (3-5). After a few minutes in which items are shared and discussed, students' names are randomly drawn ("Winner's Envelope"), and s/he tells about someone else's information.

7. Dynamic Discussions

For discussions after an event that creates much interest and energy like:
  * assembly
  * movie
  * field trip
  * natural occurrence (earthquake/first snowfall)
  * guest in room
  * important news event

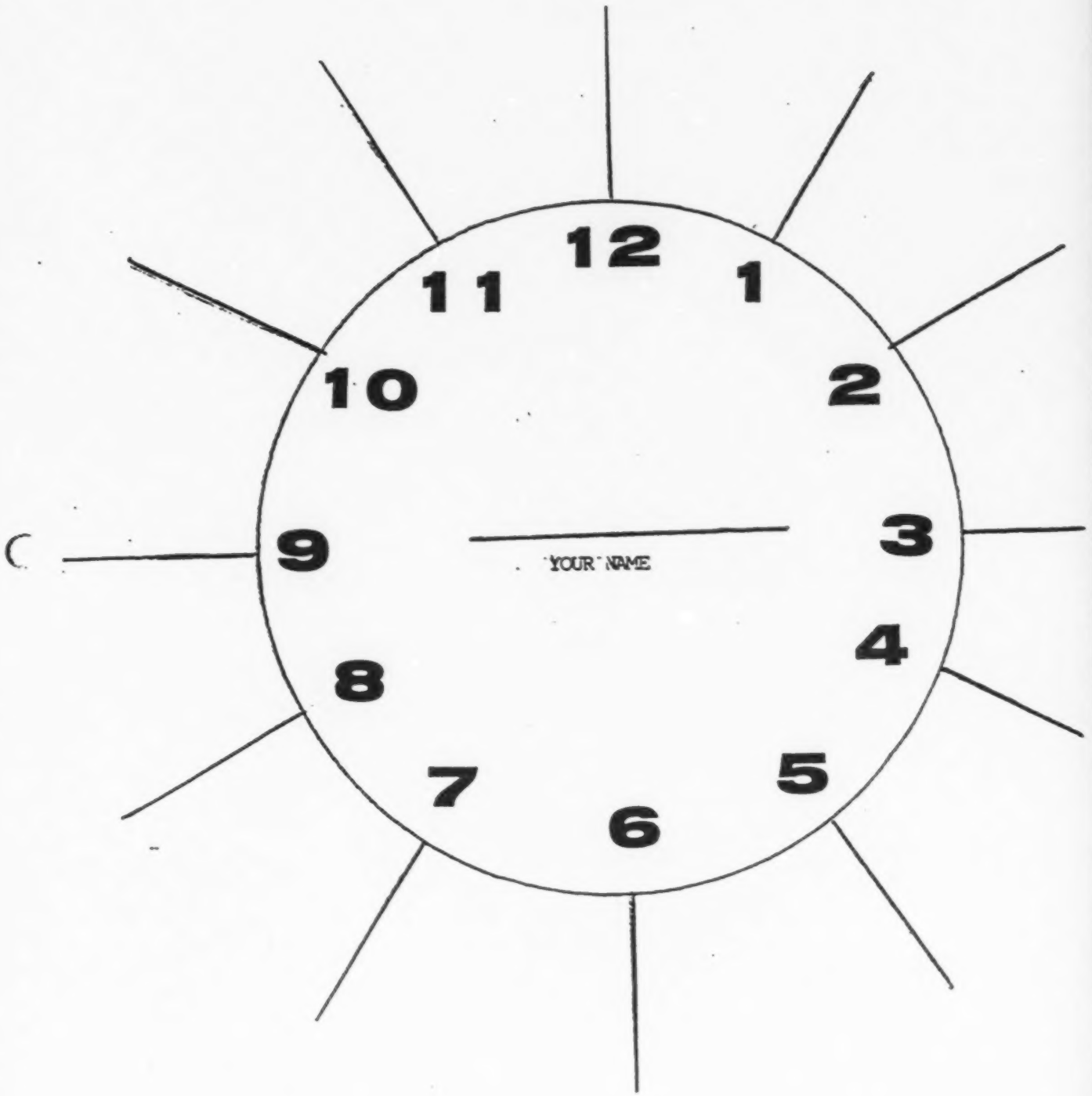
In group, write or draw one of the following (assigned by teacher) after group reaches consensus on:
  * 3 most important/exciting parts
  * new ending
  * group's favorite part
  * something that surprised group
  * what else could have happened
  * what might happen next (predict)

8. Pairs and Prepare Ideas

a. Pairs each work through the same set of problems or questions and then compare answers. When they differ, they discuss why and attempt to find one solution. Or they compare answers with another pair and discuss which answer is correct and why. One worksheet is turned in to show agreed-upon answers.

BEST COPY AVAILABLE

PAIRS CLOCK



APPOINTMENTS

PROJECT INTEGER

Objective: Students will be able to illustrate their knowledge of integers through a creative project.

You have just landed your spaceship on the planet "INTEGER." You will be on the planet for three days. During those three days you will see many things happening that you may never have seen before so, you must record those sightings. You may use a daily journal, a tape recorder, write a story, write a song or rap, or use any other method of your choice. You must also bring back an enlarged photo (poster board) of a picture you took while visiting planet "INTEGER."

The following words must be present in your record log(i.e.daily journal, song/rap, story, etc.).

Positive
Negative
Opposites
Variable
Numerical
Expression

You must also have an order of operations problem in your log. Write it out first then, show the problem mathematically. For example, I saw the opposite of one hitching a ride with five and at the end of the trip they tripled. When the ride was over they were both twelve. $(-1 + 5) * 3 = 12$.

DUE DATE: December 13, 1996
Projects turned in early will be displayed during openhouse.

Design a Dream Room

The objective of this project is for students to show their understanding of finding area of an object. Students will also explore scale drawing.

Description of project: Students are to choose a room in their home they want to redesign. Measurements should be taken of that room to be used for making a scaled down replica of the room using a 1 inch = 1 foot scale (including the walls if figured). Students must figure the squared area, which they will cover with a choice of floor covering.

Grading:
"A" project: This project should not only include a scaled down replica, but also include the following: A 1/4 inch = 1 foot scale drawing of the room on graph paper (use a ruler, extension and dimension lines), and an actual sample piece of carpet or vinyl flooring placed on the floor (sample can be found at any carpet store). The area of the walls should also be figured and they should be wallpapered or painted or both.

"B" project: This project is the exact same as the "A" project except for two changes. This project does not have to include the area and decoration of the walls. It also does not require a 1/4 inch = 1 foot scale drawing.

"C" project: This project is the same as the "B" project and can also exclude the actual sample floor covering. However, the floor must still be covered, but the student can make the covering out of construction or other paper material. If the student chooses to make a vinyl floor covering he/she must design a tessellation. A tessellation is a repeated pattern that covers the entire surface of the floor.

Anything less than the expectations of a "C" project will be graded accordingly.

Extra Credit!!!!!!!!!!!!!

Fixtures may be included to enhance the vision of your project. Fixtures may include the following: windows in the walls with window coverings made of material, doors, furniture, such as, chairs, tables, dressers, etc., pictures, and anything else you want to decorate your room with. Extra credit points will be given using a 0-3 point range. ***Remember***, too much can ruin the appearance of your figure. Don't try to impress me with too much.

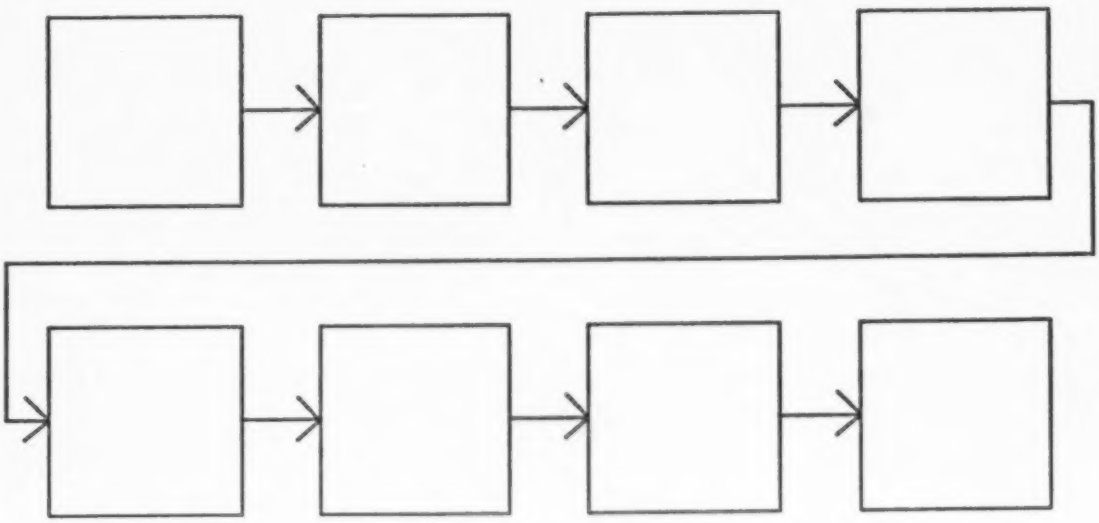
This handout needs to be turned in with your project. Also, a parent must sign at the bottom so I know someone has read it

Parent signature_____

NAME _____ CLASS _____

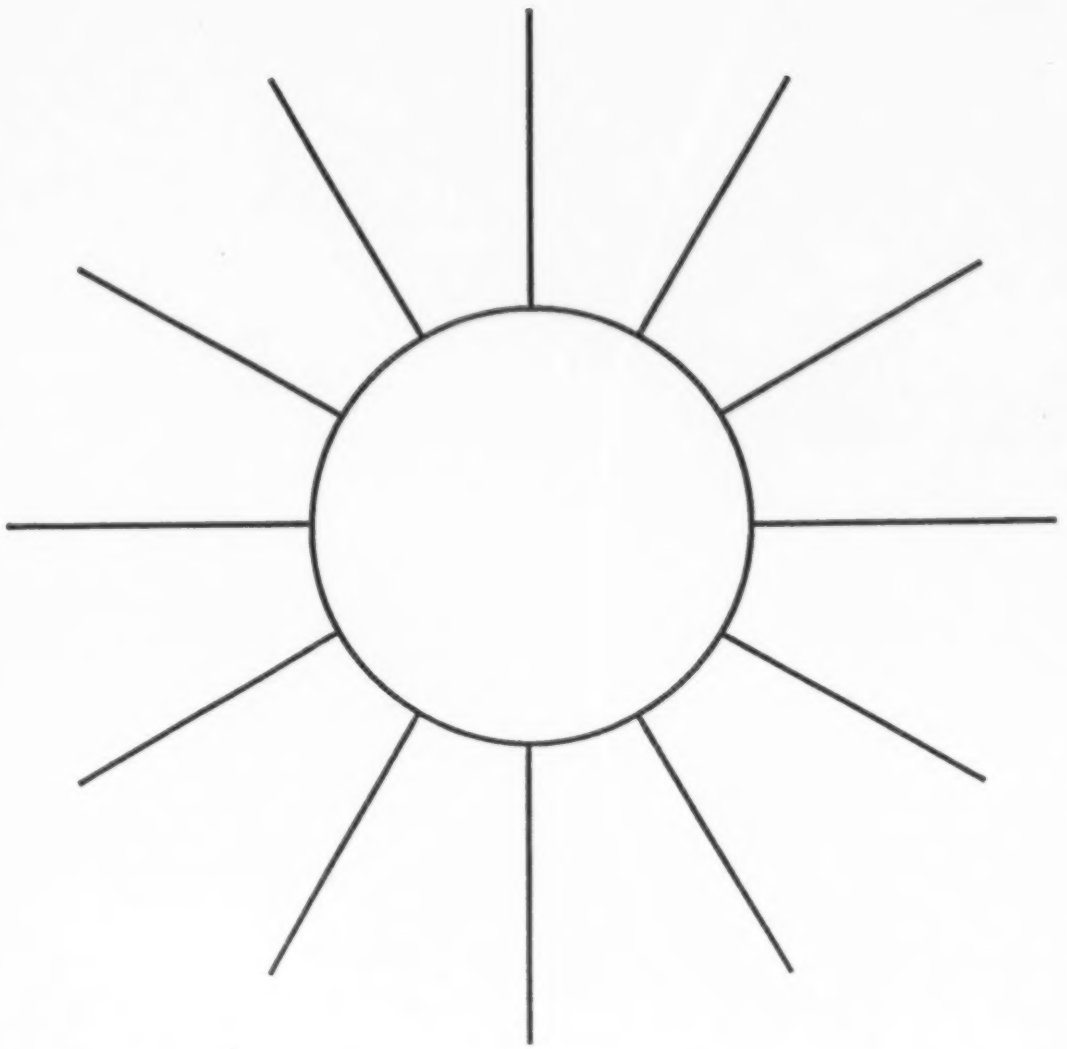
THE SEQUENCE CHART

Problem:



NAME _____ CLASS _____

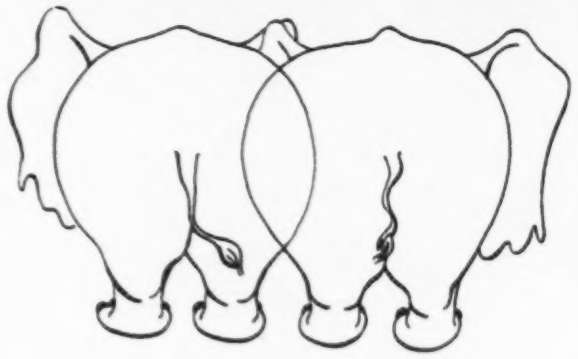
THE WEB



THE T-CHART

Topic _____

Looks Like	Sounds Like



Venn Diagrams: LCM and GCF

Worksheet

Names _____

_____

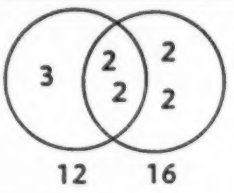
Date _____ Class _____

Directions:

1. Find the prime factors of your numbers.
2. When the two numbers share a factor, place that factor in the intersection of the two circles.

Remember: The intersection of the two circles is the GCF (greatest common factor). The union of the two circles is the LCM (least common multiple).

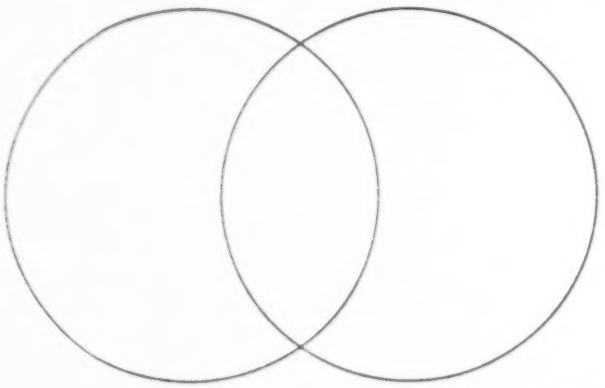
Example: Let's look at 12 and 16
The prime factors of 12 are 2 x 2 x 3
The prime factors of 16 are 2 x 2 x 2 x 2
The intersection, 4, is the GCF
The union, 48, is the LCM



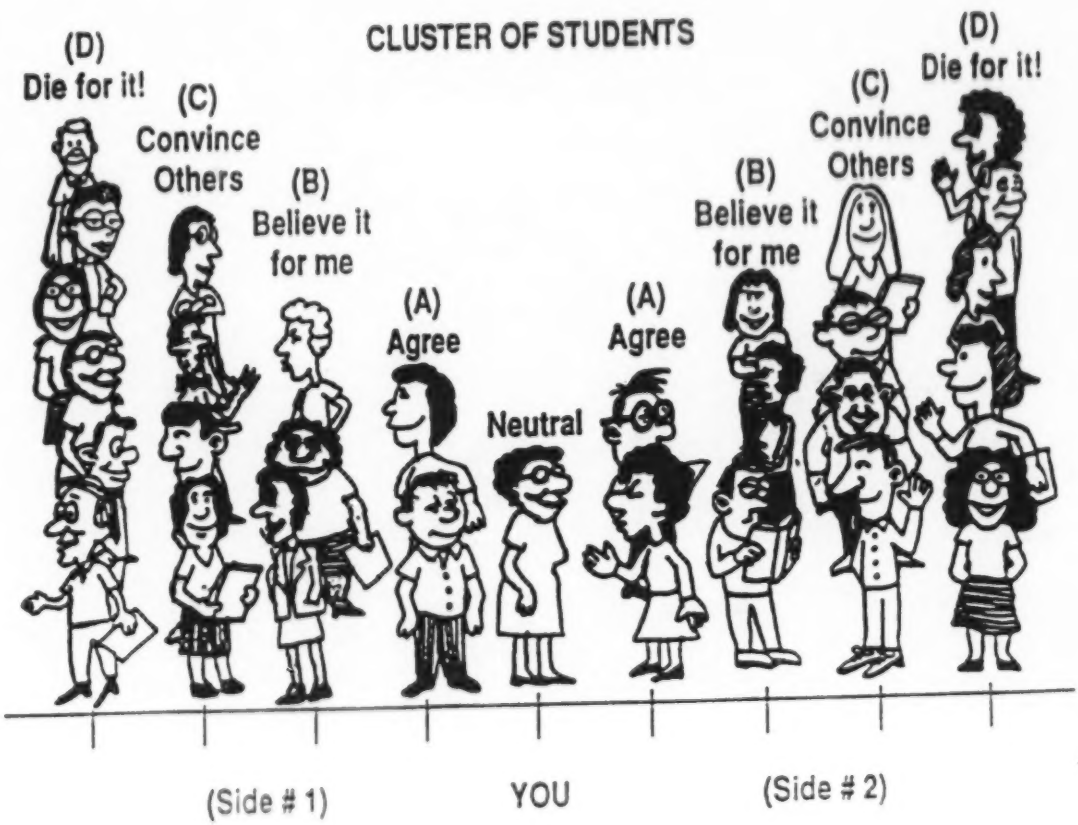
My two numbers are: _____

Their prime factors are: _____

_____



HUMAN GRAPH


CLUSTER OF STUDENTS
(D) Die for it!
(C) Convince Others
(B) Believe it for me
(A) Agree
Neutral
(A) Agree
(B) Believe it for me
(C) Convince Others
(D) Die for it!
(Side # 1)
YOU
(Side # 2)